LISTING OF THE AMENDED CLAIMS

Please amend claims 1-3, 5, 8-9, 17, and 23; cancel claims 4 and 13; and add claims 38 and 39 in accordance with the following listing:

1. (Currently Amended) An apparatus, comprising a sensing device including:

a sensor operable to detect one or more physical characteristics and provide a corresponding electrical sensor signal; ~~and~~

transient suppression circuitry coupled to the sensor, the transient suppression circuitry including a first negative temperature coefficient thermistor operable to couple with an electrical power source for the sensor, the transient suppression circuitry being responsive to a power surge condition from the source to dissipate electrical power associated with the surge through the first thermistor; and

a controller operable to provide the electrical power source, the controller being responsive to the sensor signal.

2. (Currently Amended) ~~The apparatus of claim 1~~ An apparatus, comprising a sensing device including: a sensor operable to detect one or more physical characteristics and provide a corresponding electrical sensor signal; and

transient suppression circuitry coupled to the sensor, the transient suppression circuitry including a first negative temperature coefficient thermistor operable to couple with an electrical power source for the sensor, the transient suppression circuitry being responsive to a power surge condition from the source to dissipate electrical power

associated with the surge through the first thermistor, wherein the transient suppression circuitry includes a second negative temperature coefficient thermistor.

3. (Currently Amended) ~~The apparatus of claim 1~~ An apparatus, comprising a sensing device including:

a sensor operable to detect one or more physical characteristics and provide a corresponding electrical sensor signal; and

transient suppression circuitry coupled to the sensor, the transient suppression circuitry including a first negative temperature coefficient thermistor operable to couple with an electrical power source for the sensor, the transient suppression circuitry being responsive to a power surge condition from the source to dissipate electrical power associated with the surge through the first thermistor, wherein the one or more physical characteristics include a change in a magnetic field detectable with the sensor.

4. (Cancelled).

5. (Currently Amended) The apparatus of claim 1 [[4]], further comprising an output device coupled to the controller, the controller being operable to provide an output signal to the output device in response to a change in the sensor signal.

6. (Original) The apparatus of claim 1, wherein the sensor assembly further comprises a second negative temperature coefficient thermistor, and the sensor is coupled between the first thermistor and the second thermistor.

7. (Original) The apparatus of claim 6, wherein the sensor is coupled in series with one or more indicators between the first thermistor and the second thermistor.

8. (Currently Amended) The apparatus of claim 7, ~~further comprising: a programmable logic controller coupled to the sensor assembly, the controller including the electrical power source for the sensor; an output device coupled to the controller; and~~ wherein the first thermistor is coupled between one node of the power source and the sensor, the second thermistor is coupled between another node of the power source and the one or more indicators, and the controller is responsive to a change in the sensor signal to output a control signal to the output device.

9. (Currently Amended) A method, comprising:

providing electrical power to activate a sensing device; suppressing a transient power surge initiated by said providing, the transient power surge having a duration of at least 250 microseconds and a peak current of at least 500 milliamperes;

detecting a change in one or more physical characteristics with the sensing device; and

wherein said suppressing includes dissipating at least a portion of the transient power surge with a first negative temperature coefficient thermistor and the change in the one or more physical characteristics includes an alteration in a magnetic field.

10. (Original) The method of claim 9, wherein the duration of the transient power surge is between 250 and 500 microseconds and the peak current is between 0.5 and one ampere.

11. (Original) The method of claim 9, further comprising a second negative temperature coefficient thermistor.

12. (Original) The method of claim 9, which includes: coupling the sensing device to a controller; and supplying the electrical power from the controller.

13. (Cancelled).

14. (Original) The method of claim 9, which includes:

coupling the sensing device and an output device to a controller; and

providing an output signal to the output device from the controller in response to said detecting.

15. (Original) The method of claim 9, wherein the sensing device includes a sensor and an indicator electrically coupled together.

16. (Original) The method of claim 15, further comprising coupling the first thermistor to one of the sensor and the indicator.

17. (Currently Amended) A sensing device, including: a sensor to detect a change in one or more physical characteristics and provide a corresponding electrical signal; a connector to couple the sensing device to other equipment including an electrical power source for the sensor; and transient suppression circuitry coupled to the sensor and the connector, the transient suppression circuitry including a first thermistor ~~operable to~~ electrically coupled ~~couple~~ to a first node of the connector and a second thermistor coupled to a second node of the connector, the transient suppression circuitry being responsive to a power surge condition from the electrical power source to dissipate at least a portion of electrical power associated with the surge.

18. (Original) The device of claim 17, wherein the change in the one or more physical characteristics corresponds to alteration of a magnetic field detectable with the sensor.

19. (Original) The device of claim 17, wherein the first thermistor is of a negative temperature coefficient type.

20. (Currently Amended) The device of claim 19, wherein the first thermistor and the second thermistor are each of a negative temperature coefficient type ~~the transient suppression circuitry includes a second thermistor of the negative temperature coefficient type, and the second thermistor is coupled to a second node of the connector~~.

21. (Original) The device of claim 20, further comprising one or more indicators electrically coupled to the sensor.

22. (Currently Amended) The device of claim 21, wherein ~~the transient suppression circuitry includes a second thermistor of the negative temperature coefficient type, and~~ the sensor and the one or more indicators are electrically coupled in series between the first thermistor and the second thermistor.

23. (Original) A system, comprising:

a sensor to detect a change in one or more physical characteristics and provide a corresponding electrical sensor signal;

a controller including a power source for the sensor; and

transient suppression circuitry coupled between the sensor and the power source of the controller, the transient suppression circuitry including a first thermistor to protect the sensor from a power surge by dissipating at least a portion thereof.

24. (Original) The system of claim 23, wherein the first thermistor is of a negative temperature coefficient type and the transient suppression circuitry further includes a second thermistor of the negative temperature coefficient type.

25. (Original) The system of claim 23, further comprising means for indicating coupled to the sensor.

26. (Original) The system of claim 23, further comprising an output device coupled to the controller, the controller being operable to respond to a change in the sensor signal to provide an output signal to the output device.

27. (Original) The system of claim 23, wherein the sensor and the transient suppression circuitry are packaged in an integral unit for connection to the controller.

28. (Original) The system of claim 23, further comprising one or more indicators electrically coupled to the sensor and wherein the transient suppression circuitry includes a second thermistor, the sensor and the one or more indicators being coupled between the first thermistor and the second thermistor.

29. (Original) The system of claim 23, wherein the one or more physical characteristics include alteration of a magnetic field detectable with the sensor.

30. (Cancelled).

31. (Previously Presented) The apparatus of claim 1, wherein the sensor and the transient suppression circuitry are incorporated into an integral sensing device unit.

32. (Previously Presented) The method of claim 9, further comprising packaging the

sensing device and the first negative temperature coefficient thermistor within an integral sensing device unit.

33. (Previously Presented) The device of claim 17, wherein the sensor and the transient suppression circuitry are incorporated into an integral sensing device unit.

34. (Previously Presented) The device of claim 33, wherein the connector is incorporated into the integral sensing device unit.

35. (Previously Presented) A sensor system, comprising: a sensor operable to detect one or more physical characteristics and provide a corresponding electrical sensor signal; and a controller including a power source for the sensor; and transient suppression circuitry coupled between the sensor and the power source of the controller and including a first thermistor to protect the sensor from a power surge by dissipating at least a portion thereof; and wherein the sensor and the transient suppression circuitry are incorporated into an integral sensing device unit located remote from the controller.

36. (Previously Presented) The system of claim 35, wherein the first thermistor is of a negative temperature coefficient type; and wherein the transient suppression circuitry further includes a second thermistor of a different temperature coefficient type.

37. (Previously Presented) The system of claim 36, wherein the second thermistor is of a negative temperature coefficient type.

38. (New) The apparatus of claim 2, wherein the one or more physical characteristics include a change in a magnetic field detectable with the sensor.

39. (New) The apparatus of claim 2, further comprising a controller operable to provide the electrical power source, the controller being responsive to the sensor signal.